

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET
(pursuant to NAC 445A.236)

Permittee Name: Paradise Valley Sewer District
P.O. Box 25
Paradise Valley, NV 89426

Permit Number: NEV89011

Location: Paradise Valley Wastewater Treatment Facility (WWTF)
¾ mi. S of Paradise Valley, Humboldt County, NV
Latitude: 41° 28' 57"N, Longitude: 117° 31' 56"W
Township 42N, Range 39E, NW¼ of Section 36

General: Paradise Valley is an agricultural community located on State Route 290 approximately 40 miles north of Winnemucca in Humboldt County, NV. Presently, 67 residences are served by the wastewater collection and treatment system. The facility does not employ a local operator and relies on some volunteer effort for oversight tasks. The District contracts its certified operator requirements to SPB Utility Services, Inc. In the past, inmate crews from Humboldt Conservation Camp have been tasked to remove weeds.

The present facility was constructed in the mid-1970's in response to groundwater (nitrate) concerns, which had been raised by the State Health Division. The town's smaller building lots (e.g., 0.1 acre) were deemed too small to safely support individual septic systems and domestic supply wells. A community WWTF was constructed approximately ¾ mile south and downgradient of the main residential area to protect the town's supply wells. The facility design consists of two facultative treatment ponds and two evaporation/percolation ponds. The four ponds are not lined. Each facultative pond is 0.5 acres in area and designed for an operating depth of 4½ ft. (3 ft. of water & 1½ ft. of sludge storage). By design, treatment would occur in these ponds in parallel. The effluent would then be discharged to two evaporation/percolation ponds, each 2.0 acres in area. The facility was designed for a daily maximum flow of 26,500 gallons per day (gpd). Since startup, wastewater flows from this community have always been well below design capacity. The low wastewater flow and pond seepage losses have resulted in the facultative ponds maintaining 1 ft. or less of operating depth, which is insufficient for proper treatment. The facility is also sited in an area with shallow groundwater. The local water table is influenced by agricultural irrigation (flood irrigation practices) and runoff (snowmelt/rainfall) from the Santa Rosa Range. The facility is sited within 30 ft. of a stormwater/irrigation runoff ditch. Seasonal flow in this ditch is likely elevating the local groundwater table at the ponds.

In 1992, Westec (Welsh Engineering Science & Technology, Inc.) submitted a facility report to the Division, which made recommendations on improvements. Westec recommended that a smaller treatment pond was needed, and that on average, only 4,000 gpd of treatment capacity was needed. Westec recommended lining one smaller facultative pond with an HDPE liner to eliminate seepage losses, control weed growth and protect groundwater. The Paradise Valley Sewer District has not enacted these recommendations.

The Division last inspected this facility on August 29, 2002. According to the inspection report, influent is first discharged into facultative pond #1, which would then overflow to facultative pond #2. At the time of the inspection, pond #1 contained only minimal standing water, ½ ft. at most. The water depth in facultative pond #2 could not be gauged because of the excessive weed growth. Any overflow from pond #2 would then discharge to evaporation/percolation pond #4. Weed growth in treatment ponds can attract nuisance vectors (e.g., mosquitoes) and should be regularly removed.

The Division's findings agree with Westec's report that facility improvements are necessary to improve treatment and protect groundwater quality. A modified design needs to reflect the true wastewater demand, which is certainly less than the original design capacity of 26,500 gpd. Groundwater monitoring is also required if this facility continues to discharge to groundwater. According to the current permit's Schedule of Compliance Requirements, the facility was to have installed a monitoring well and submitted a revised O&M Manual by August 26, 1998. Pond #1 was also to have been lined by February 26, 1999. These three compliance items remain overdue. The photos below illustrate the present condition of the facility.



Photo #1: Facility Entrance



Photo #2: Weed Growth in Pond #1



Photo #3: Minimal Wastewater Depth in Pond #1



Photo #4: Weed Growth in Pond #2 Inlet

Flow: The WWTF is presently permitted for a flow of 22,000 gpd (0.022 MGD). According to NAC 445A.286, a certified operator is not required for a pond treatment system with a capacity of 10,000 gpd or less. In order to request this waiver, the facility can request a reduction in its permitted flow limit.

A Palmer-Bowlus flume is gauged to determine flow. Because the actual flow demand is well below capacity, the facility generally reports conditions where the flow was too low to measure in the flume.

Receiving Water Characteristics: The receiving water for seepage losses in facultative ponds #1-2 and infiltration in evaporation/percolation ponds #3-4 is groundwater of the State. The groundwater flow direction is to the south-southeast. Depth to groundwater is shallow (e.g., 0-10 ft. bgs).

Proposed Effluent Limitations and Special Conditions:

Table 1: Plant Discharge Limitations¹

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, MGD (Influent)	0.022		Quarterly	Discrete (Flume Reading)
CBOD, mg/L (Influent)	Monitor & Report		Quarterly	Discrete
CBOD, mg/L (Effluent)	Monitor & Report		Quarterly	Discrete
TSS, mg/L (Influent)	Monitor & Report		Quarterly	Discrete
TSS, mg/L (Effluent)	Monitor & Report		Quarterly	Discrete
pH, Std. Units (Effluent)	Between 6.0 & 9.0		Quarterly	Discrete

1. These discharge limits are applicable for a lined treatment pond.

Table 2: Groundwater Monitoring^{1,2}

PARAMETER	GROUNDWATER LIMITATIONS	MONITORING REQUIREMENTS	
		Measurement Frequency	Sample Type
TDS, mg/L	Monitor & Report	Quarterly	Discrete
Chlorides, mg/L	Monitor & Report	Quarterly	Discrete
Nitrate as N, mg/L	10.0	Quarterly	Discrete

Total Nitrogen as N, mg/L	Monitor & Report	Quarterly	Discrete
Depth to Groundwater, ft	Monitor & Report	Quarterly	Field Measurement
Groundwater Elevation, ft	Monitor & Report	Quarterly	Field Measurement

1. A downgradient monitoring well is required if the facility discharges effluent to the groundwater.
2. Groundwater samples shall be taken only after purging at least three (3) well volumes of groundwater from the monitoring well.

Rationale for Permit Requirements: The Division requires a lined treatment pond at this facility. The Division has proposed the monitoring requirements in Table 1 on the basis that a lined pond will be installed and that the daily demand from this community remains low, e.g., 4,000 gpd per Westec's 1992 report. Carbonaceous Biochemical Oxygen Demand (CBOD or Inhibited BOD) and Total Suspended Solids (TSS) effluent requirements have therefore been proposed to be Monitor & Report. Groundwater monitoring is required if the facility will discharge effluent to groundwater.

Schedule of Compliance: The Permittee shall submit the following items to the Division for review and approval (**all compliance deliverables shall be addressed to the attention of the Compliance Coordinator, Bureau of Water Pollution Control**):

- Within thirty (30) days of the permit issuance date, the Permittee shall submit a letter indicating its progress within the last five years to provide a lined treatment pond and monitoring well in accordance with the Schedule of Compliance requirements (Parts I.A.16.a through I.A.16.d), issued on February 26, 1998.
- Within ninety (90) days of the permit issuance date, the Permittee shall submit a Facility Plan and propose a schedule for providing improvements to the Paradise Valley Wastewater Treatment Facility. If the facility's proposed design incorporates wastewater treatment pond(s), the pond(s) shall be lined and designed in accordance with the WTS-5 publication: *Guidance Document for Design of Wastewater Treatment Ponds*. The Facility Plan is required to include one downgradient groundwater monitoring well if the facility discharges effluent to groundwater.
- Within ninety (90) days of implementing the facility improvements discussed in the Facility Plan, the Permittee shall submit a revised Operations and Maintenance (O&M) Manual prepared in accordance with the Division's WTS-2 guidance document: *Minimum Information Required for an Operations and Maintenance Manual*. The revised O&M Manual shall include a section on groundwater sampling procedures for the monitoring well (MW-1) if the facility discharges effluent to groundwater.

Procedures for Public Comment: The Notice of the Division's intent to issue (renew) a permit

authorizing the operation of the Paradise Valley WWTF, subject to the conditions contained within the permit is being sent to the **Humboldt Sun** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time-stamped faxes, e-mails, or hand-delivered items) to the Division is **May 12, 2003 by 5:00 P.M.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination: The Division has made the tentative determination to issue (renew) the proposed discharge permit for a period of five (5) years. The permit conditions require the submittal of a Facility Plan for providing facility improvements to protect State groundwater resources and meet wastewater treatment pond design requirements.

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Revised: April 8, 2003

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